

REMARKS

Upon entry of this amendment, independent claim 1 with dependent claims 3-8 will be present in the application.

The specification has been amended to differentiate recesses 4 from receptacles 6 and to correct two typographical errors. Claim 1 has been amended to provide proper antecedent basis for the term "side walls", to recite that a first side wall faces a flow of pulp suspension and a second side wall faces away from the flow of pulp suspension, to recite that the supporting element has a plurality of receptacles, each having an inner surface defining the recesses, to recite that a portion of each rod is received within a receptacle, and to recite that the inner surface of the receptacle defines a clearance angle α with the second sidewall of the rod. Such structures are described on page 4, line 4 to page 5, line 3, of the specification and shown in Figures 1 and 2. Claims 4 and 5 have been amended merely to conform the language of the claims to the language of claim 1. Therefore, the amendments do not introduce any new matter.

Claims 1 and 3-8 were rejected under 35 U.S.C. § 103 as being unpatentable over EP 499,154. Claim 1 now recites that the inner surface of the receptacle defines a clearance angle α with the sidewall of the rod which faces away from the flow of pulp suspension. Such a clearance is not disclosed in the art cited in the Office Action. When the supporting element is bent to form a screen cylinder, the deformation of the supporting element clamps the rod within the receptacle. In the device of EP '154, the clamping force exerted on the rod causes cracks to initiate in the supporting element which extend from the bottom of the rod into the supporting element. Such cracks can lead to premature failure of the screen. In the screen of the subject invention, the clearance angle α limits the clamping force exerted by the supporting element, preventing the initiation of such cracks. It cannot be logically argued that it would have been obvious to modify the devices of the cited references to have such a clearance angle in view of the fact that such conventional devices have not adopted the subject configuration to attain the advantages discussed above. Therefore, the rejection of claim 1 under 35 U.S.C. § 103 must be withdrawn.

The various dependent claims add additional features to the independent claims, and are therefore believed to be allowable. Also, the dependent claims are believed

patentably distinct on their own merits as being directed to combinations not suggested by the references.


The Office Action alleged that the relative dimensions of the protrusions recited in claim 3 and the relative dimensions of the rods recited in claim 7 "are not considered to be a patentable distinction since the instant invention would not appear to function any differently than the '154 device." The value of the protrusion dimensions recited in claim 3 and the rod dimensions recited in claim 7 have proven to provide a screen which has greater resistance to vibration. Accordingly, vibration related fatigue takes longer to develop and the screen has a longer lifetime than conventional screens.

The Office Action alleged that "the mere duplication of parts/number of protrusions is not considered to be patentably significant unless a new and unexpected result is produced". The features recited in claims 4 and 5 also provide advantages, compared to conventional screens, as discussed on page 2, lines 23-30 of the specification.

In view of the above-directed amendments and the proceeding remarks, prompt and favorable reconsideration is respectfully requested.

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the claims:

Claims 1, 4 and 5 have been amended as follows:

1. A screen comprising

a plurality of rods, each of the rods having a plurality of side walls, a first side wall facing a flow of pulp suspension and a second side wall facing away from the flow of pulp suspension, at least one of the side walls defining at least one protrusion, each protrusion having an elliptic shape or a circular shape having a radius r of 0.1 mm $< r < 2$ mm; and

at least one rod-bearing supporting element having a plurality of receptacles, each of the receptacles having an inner surface defining at least one recess having a shape which is complementary to the protrusion of the rod;

wherein a portion of each rod is received within a receptacle and each protrusion of the rod is received within a recess of the supporting element and the inner surface of the receptacle defines a clearance angle α with the second sidewall of the rod.

4. The screen according to Claim 1, wherein [the supporting element has at least one side wall and] at least one of the rods has three or more protrusions received within recesses in [one side wall] the inner surface of the receptacle of the supporting element.

5. The screen according to Claim 1, wherein [each of the rods has oppositely disposed] the first and second sidewalls[,] each [having] have at least one protrusion, the first sidewall having a different number of protrusions than the second side wall.

In the specification:

The paragraph bridging pages 5 and 6 has been amended as follows:

The connection between rods and supporting elements is essentially positive, i.e. without plastic deformation of the individual components or additional connecting links, such as weld seams. A screen of this type can be made, for example, by pressing the rods together with the supporting elements until they lock into place. Another form of manufacture is to bend the supporting elements open elastically so that the [recesses] receptacles 6 for the rods expand and the individual rods 1 can be inserted. When the supporting elements have sprung back into place, a level screen mat is formed by the clamped profile rods. Thanks to the above mentioned design as snap connection, this process permits the rods 1 to be inserted precisely into the supporting elements 2, thus lowering the slot width tolerances. If this level screen is then shaped into a screen basket, the clamping effect is increased further due to the bending radius when the screen is rolled up. Pressing the protruding ends of the rods together with the supporting elements 2 increases the stability of the screen mat further. The supporting elements 2 can also be shaped as rings with the [protrusions] receptacles 6 according to the invention worked into these rings, where the dimensions are somewhat smaller than specified, i.e. the [protrusions] receptacles 6 are slightly smaller than the rods 1. Subsequently the rings are nicked at one point and bent open far enough for the rods to lock into place. When the rings have bent back into place, they can be welded together to form a basket.